

AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICE CURRENT.

"O fortunatos nimium sua si bona norint
Agricolae." VIRG.

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AGRICULTURE.

ADDRESS

Delivered by JOHN DAVIS, Esq. of Augusta, before the Members of the AGRICULTURAL SOCIETY OF MAINE, at their Annual Meeting, on October 31, 1821; being the day of their Show of Cattle, &c. then held at HALLOWELL.

The occupations of the President of this Society, though they have assumed a new shape, have again deprived us of the pleasure of listening to that Address from him at our Annual meeting, which the rules of our Society might otherwise lead us to expect.—This appears however to be the only good office in our favor, which our President seems willing to omit; as is again made manifest by his attendance among us to preside at an Annual Meeting, the second which has been held at this place.

In consequence of the state of things here referred to, the Committee of Publications has been a second time charged with the appointment of a sub-committee, to prepare an Annual Address to the Society; and I am requested to deliver to this assembly that of the present year.

As the Address delivered here the last year was designed to demonstrate the Importance of Agriculture to a State circumstanced like Maine, it is in proper connexion with that Address, that we should notice on the present occasion the various methods by which Agriculture can best be promoted. Since that part of our subject however will be passed over, which is purely Agricultural; we shall merely have to consider some of the modes of preparing our farmers for their important profession; and also the means by which they can best obtain assistance in their pursuit of it.

1st. Then, our farmers ought to possess diligence, economy, neatness, method, and a love of carrying things to their due point of perfection; together with certain well known principles of morality. It happens fortunately for those intended for the occupation of farmers in this country, that while young, they are generally placed upon farms so extensive, as to keep the families upon them distinct from each other, and consequently within the reach of some control. Here it is then, that the above habits and principles may easily be enforced upon the young farmer, and be joined to domestic feelings and to a sense of religion; upon which pillars the characters best capable of a solid conduct may in most cases be expected to be founded.

2d. The next requisite for a farmer is information. By information, we do not mean theory separate from experience; for every intelligent farmer when settling in a new neighborhood, ought at first to keep his eye on the practice of the inhabitants who are most successful in the management of their farms; till he has attained a local experience of his own. Formerly, diligence and economy made the chief dependence of the husbandman; but so many secrets of art and nature are now laid open to view, and so many other helps offer themselves to him in our day, that if he does not avail himself of some of these advantages, rivals will soon out-strip him.

Farmers however must in general be content with practical knowledge. Their experiments should be few and of a limited nature; and they must learn as much as they can from the experiments of others, for these cost them nothing.*—The poor especially should be cautious; for in poverty, as in the conduct of war, there is seldom room for a second grand mistake.

* Felix quem faciunt aliena pericula cautum.

But the worst difficulty respecting agricultural knowledge is, that it is hard to obtain it in a short time in a form suited for immediate use.

3d. Some methods for obtaining and for circulating knowledge shall therefore be mentioned.

First, a liberal premium may be offered for the composition of a short and interesting treatise on the practical part of the Agriculture fitted for Maine; and another premium for a like treatise, teaching the general principles of Agriculture.—Next a periodical publication may be set on foot, under the direction of the Committee of publications, and be confined to agricultural subjects; similar to those journals now so frequent in the civilized world, in the case of other branches of knowledge; and this will serve as a channel for the communications of Agriculturists with each other. Again, an agricultural Library is required both for readers and for writers on husbandry.—The directors of the social libraries throughout the country should also be invited, (where this is not done already) to make their purchases of Agricultural books, as extensive as their readers will permit.—Lastly, prize questions (such as are contemplated by the constitution of our Society,) on subjects of husbandry, should be brought forward as soon as the finances of the Society can support the charge.—But perhaps of all these projects, that of procuring the immediate composition of two treatises on Agriculture, divided as above mentioned, is the most important, (a)

4th. The next article which is to be named, might have been classed under the preceding head, did not its importance claim for it a separate consideration; we mean, a professorship of Agriculture.—This professorship may be placed at a College; but must be open to the attendance of strangers; who, at the same time that they are pursuing this course of lectures may under certain conditions be permitted to attend such other lectures, as can be beneficial to their great pursuit.—It is obvious that as these lectures will chiefly regard principles, they may not be suited to the generality of farmers; nevertheless from the practice of those who will have attended them, something may be learned which shall be useful to farmers generally throughout the country.—These lectures will differ from the two treatises mentioned above in their being more extensive as well as in being accompanied with experiments and the exhibition of models.

How this professor is to be compensated for his labors supposing the fees from his pupils to be insufficient, will be mentioned hereafter.

5th. Another mode for advancing Agriculture is to support Societies like our own; but on this subject we need not dwell before this respectable assembly, since it is now collected here in consequence of a conviction of this important truth.

6th. But we must speak more at length of what are called Cattle Shows; for which the name of Agricultural Exhibitions would apparently have been more appropriate, comprehensive and respectable.

We shall recite some of the good tendencies of these institutions.—They manifest in a single view to every farmer, what can be done by the best of their profession; they lead not only to the imitation of what is exhibited, but to attempts at higher excellence; they offer the immediate means for the improvement of the stock, crops, tools, and machines of the farmer; they give to our farming animals a better

(a.) Mr. Arthur Jones mentions as a source of information, travelling for a week or fortnight in the best cultivated countries, and holding conversation with their intelligent farmers; provided a trusty person in the mean time can be kept at home. He recommends June as the proper month for this in England.

chance of escaping cruelty and neglect, by rendering them more valuable in their qualities and more respectable in their appearance; they demonstrate the attachment felt for agriculture by all ranks of the community; they make Agriculturists from different parts of the country acquainted with each other, in order that they may profit by the mutual communication of knowledge and friendly services; like great national festivals, they bring together annually many other persons of all descriptions, and thus serve as a new link to society; under cover of them also, other interesting articles may be displayed to public notice; they promise gradually to present us the advantages of a public fair, (on the principle of those known in Europe,) at which all may buy, sell, and barter agricultural articles, and by means of samples enter upon still more important bargains; and they offer a gratification to the feelings of many, which is not only free from danger and crime, but may be accompanied by profit, as well as enlarge the ideas and therefore elevate the aims of the spectator. These institutions have accordingly rapidly spread in this country, since they were first a few years ago introduced from England into Massachusetts; and have had their objects extended; and they are growing in favor wherever they have been tried; unless where they have interfered with each other, from being placed too near together.

These institutions promise also to be durable.—The games in Greece called Olympic Games, * * * did not finally close their career, till near twelve centuries after their first institution. (b)

If common sense were to decide us in our estimate of the comparative value of Institutions like that which we are celebrating, and those of the ancients; we might safely assert that our Agricultural Exhibitions are, for our purposes at least, far more useful than the public games of the Greeks; and they are certainly far more innocent than the public shows of the Romans, which in truth were wantonly cruel, and in some cases expressly designed to extinguish in the spectators the feelings of humanity; (c) differences, doubtless owing

(b) Dr. Burney in his History of Music, says, that "in the year 775, before Christ, the Olympic games first began to be regularly celebrated once in fifty-two months, or on the second month after the expiration of four years; and to serve as epochs to all Greece," (under the name of Olympiads.) And again he relates, that "the Olympic games, according to St. Chrysostom, continued to be celebrated with splendor to the end of the fourth century." Vol. 1. p. 368 and 373. See also Potter's Antiquities, Vol. 2. B. 2, C. 24. In the diminutive territories of Greece (proper,) there were four games; namely, the Olympic, the Pythian, the Nemean, and the Isthmian, with the greater and smaller Panathenæan; being all called Sacred.

(c.) In truth, the conduct of some of the Greeks was not less inhuman, than that of the Romans; and this barbarity among the Greeks as well as among the Romans, had some relation to the degree in which their institutions favored war. The Lacedæmonians from time to time, and as part of their national policy, slaughtered in cold blood, a portion of the Helot nation, which they held in domestic slavery; to reduce their numbers to the limits prescribed by policy and economy. The Romans on their side, may be supposed to have had in it view secretly, but yet principally, to cut off the most daring and active of their own slaves, by training them to fight in their own presence under the name of gladiators (or swordsmen).—The Greeks not being wealthy, originally had no shows of gladiators or of wild beasts; but after the Romans had made the world familiar with these practices, the

ing to the happy influences of the christian religion, and of an improved state of knowledge and education.

Our agricultural exhibitions are as yet inferior to the games of the Greeks as regards *horses*, which are still too much neglected on this vast continent; but ten years will probably place us on a level with the Greeks in this particular. As to the feats of bodily strength and skill exhibited among the Greeks, our manners neither demand nor admit them; and *foot races*, if they were of any value, might easily find a place among us. *Military exercises* have a different field and a different form of display with us, from those known in antiquity; and we are in any event rapidly putting ourselves on a *par* with all the nations with whom we are likely to contend, whether by land or by sea. *Intellectual efforts*, which the Greeks encouraged at their public games, are much better provided for in our day, by means of printing, and the extensive spread of knowledge and civilization, exhibited in our two hemispheres. *As to Music*, which had great attention paid to it in the public games of the Greeks, it may easily find its place at our annual meetings; and when put under the safeguard of our religion, by being presented in the form of Oratorios, must become infinitely superior in its good effects to what was exhibited in Greece; where the words to which the music was set, were often licentious and seldom improving. (d)

On the whole then we may ask where any exhibition is to be named among the antients, on a great scale and calculated for domestic or pacific use, answering to our new Agricultural Institutions! We can easily add whatever is wanting to these institutions on our side; while the antient games will be found to have been deficient as to all the particulars, (*horses excepted*) which we have this day been gratified in viewing. Yet our new Institutions are only in their infancy; and may every year be improved; since they are well adapted to the feelings of our people, who are not only devoted to agriculture, and proud of its progress; but their emulation is wisely directed to the advancement of their own interest and of the national grandeur, which mainly rests upon our territory and upon its cultivation.

We say then of the policy which set on foot these Institutions, "*esto perpetua*:" may it increase, be increasing, and last forever (e)

7th. There are several other modes of assisting agriculture, which must still be mentioned; but that it may be done with a due regard to brevity, three of them will be connected under one head.

First, the public good requires that the Committees which are proposed for each County, be regularly nominated, and then be rendered active, by the aid of the Vice Presidents. The distant residence of the members of a County Committee from each other, will for the most part, tend to reduce the operations of each Committee very much to a mere written correspondence; internally within their respective Counties, and externally with the Trustees and the Com-

missions of gladiators are said to have found favour among the Greeks.

(d) The following passage stood in the address, but is now withdrawn from it, to appear only as a note.—The American farmer will find no higher delight than to hear celebrated (in words or ideas borrowed from Scripture) a display of the riches, the beauties, and the grand scenery of nature; the gratitude of the husbandman; the utility of his profession; and the innocence and charms of a country life. The talent of our vocal and instrumental performers will not only by means of this kind be made perfect; but our Poets be induced to give us more interesting forms of words, than are now attached to what is called *Sacred music*. By these means, Sacred music may in the end, obtain admission into the family of the farmer, as well as into other situations, where music of a less improving description sometimes finds its way.

(e) This conclusion may be enforced by the remarkable expression of Lord Bacon in one of his Essays: "Every nation groweth great in that it most intendeth."

mittee of Publications of this Society. The two latter will doubtless endeavor to concur with the County Committees in every good work, and to render public whatever these Committees shall be pleased to communicate.

A correspondence also may be had on the part of the Society, with the several small Agricultural Societies in our own State; and also with Agricultural Societies (small and great) in other States of our Union; and particularly with that of Massachusetts, our twin sister. The time perhaps approaches, when single States of the Union may communicate with some neighbouring State for the purpose of obtaining something useful to each State, but which neither State can easily obtain singly. If by any of these means, we can acquire, or communicate, one useful idea, it will be of National importance: and in the same manner, a single grain of serviceable wheat, imported among us by measures of this kind, may in a few years form the basis of a National Crop—These hints then, are neither to be despised, nor yet to be thought presumptuous.

But it is evident, that for these and various other purposes, the society will want suitable places of deposit for the plants, seeds, machinery, animals, and other articles which may come into its possession, or may require distribution; lest, what is thus obtained should finally be lost to our country; or not be treated with a due attention, as to the fair and prompt division of the property.

8th. There is another article to be touched upon which is of the preparatory kind, and which will seem trifling only to those who are ignorant of the great effects often to be produced by what may seem small causes. Children intended to lead a farming life, having many vacant hours, it is recommended that Gardening may be encouraged among them. The antients considered hunting as a good preparation for soldiers; but surely the relationship is still closer between gardening and farming; since as far as vegetation is concerned, these two arts rest on the very same principles. The care of these little artists, is not designed to be confined merely to vegetables and fruits; for they should be permitted to cultivate flowers and ornamental trees in addition. The traveller, who shall see our country thus in every quarter decorated by the hands of busy, cheerful children, may sometimes feel inclined to settle in it, or may make favourable report of it to others: and in any event, we ought to wish prosperity to an innocent occupation, which attaches each family to its home and to a country life; leads their thoughts to their Creator; and prepares them, as it were, in a sportive manner, for the knowledge of farming; and for habits of order, forethought, and industry. (f)

9th. But we are now come to a graver subject, that of finance; for upon a few of the points mentioned in this address, we shall want some little legislative assistance. We ask, then, who are those interested in the success of the farmer? Are they not all

(f) The opinion that Gardening of certain descriptions should be prohibited to the children of farmers, on account of its being expensive, and (to say the least of it) useless; borders too much upon severity.

With respect to expense, the land for gardening is easily spared on an American farm; young persons will task themselves also in their work, to obtain time for cultivating it; and they will naturally raise upon it something for family use, or something suitable for sale. As to the seeds for stocking such a garden, those for the first year's sowing, will easily be obtained; and the seeds for all following years, must be raised out of the garden itself.

The answer to the other part of the charge will be found in the above address; and in the remark, that Gardening was held innocent in Paradise; and that ornament, such as is sought in one species of gardening, is found widely spread through nature itself, and that nothing is looked for on this occasion, but what is actually furnished by nature.

who inhabit our State? And should not all pay a little of that *trifle* which the success of agriculture requires on such an occasion? If one hundred thousand dollars be, in a short course of time, either gained or saved to our State, by the new attentions which under proper patronage may be bestowed upon agriculture; the interest on this sum is six thousand dollars; and we appeal to those who have travelled (and especially this last year) in our different States, or have received information from those who have so travelled, whether the accounts of gain or saving in crops, in stock, and in tools, do not make this a very low estimate for the effects which may be produced in our extensive territory, which forms almost the half of New England. A tax for the farmer's aid, according to Dr. Franklin's rule, would thus soon be returned back into the pocket of the payer of it, and in effect be a mere advance. Nor should the desire of avoiding censure on account of the increase of taxes, since our separation from Massachusetts, have the least influence here; for this may be called a *gone-by* question. We cannot return to our union with Massachusetts, nor does any one seek to do it; those also who once objected to separation, are some of the very men who will be foremost in the proposition of a grant of money for the farming interest on the present occasion; and lastly, it would imply the utmost injustice to charge to the account of separation, a tax which ought to have taken place under the old Government, and which should always be withdrawn in a comparison of the charges of the two Governments, since the tax will be of a new description. Let all objectors to a tax on this subject, recollect the noble proceedings in favor of agriculture both of the state of New York, and also of one individual in it, General Van Rensselaer; who alone has consented to give five hundred dollars to an Agricultural Society annually for at least six years. The amount of our tax must of course be left to the wisdom of our legislature to decide; it is our business only to plead in favor of some tax, and to shew what are the funds for supplying it.

10th. It is now however time to conclude by the mention of a few facts, which will attach the farmer to his profession, and thus be a main aid to agriculture. In the East, Solomon and some of the Assyrian princes were fond of gardening, plantations, botany, or agriculture. The Emperors of China, also both of antient and modern times, on one day of every year in the presence of their people, plough the soil in person, and on another day they sow it; and similar wise examples have been set in other Eastern nations.—Great men likewise among the Carthaginians and among the Romans, have written on husbandry; and are mentioned with honor to this day for having so employed their time. Cincinnatus (the patron of our Cincinnati societies) a great commander in Rome, was taken from his plough to be invested with absolute power for six months, in order to rescue his country when in a state of extreme danger. In a latter age of the Roman Government an example occurred of a still more memorable description, which shall be related as nearly as possible in the words of Mr. Gibbon. The Emperor Dioclesian, after he had vanquished all his enemies and accomplished all his purposes, voluntarily retired to pass the last nine years of his life in a private condition. Reason (as Mr. Gibbon) had dictated, and content seemed to have accompanied his retreat; in which he enjoyed, for a long time the respect of those Princes to whom he had resigned possession of the World. He preserved, or at least, he soon recovered, a taste for the most innocent, as well as the most natural pleasures; and his leisure hours were sufficiently employed in building, planting and gardening. When solicited to resume the reins of government by his former colleague, Maximian, he rejected the temptation; calmly observing, that if he could show Maximian the Cabbages which he had planted with his own hands, he should no longer be urged to relinquish the enjoyment of happiness, for the pursuit of power.

In Great Britain, Mr. Arthur Young had as contributors to his publication called the Annals of Agriculture, not only Dukes writing in their own names,

but the King of England (George 3d) writing under a borrowed name. The memorable Earl Chatham and Charles Fox, with almost the whole of the nobility and gentry of the British Empire, have interested themselves in planting trees, or else the Gardening on a larger or smaller scale; and many of them have superintended the cultivation of farms and the breeding of farming animals. In our country, three Presidents of the United States have made themselves remarkable by what they have written on the subject of Agriculture; and four of our Presidents when their term of office expired, have nobly attended to the conducting of their estates; and the fifth President has a mind too excellent, and feelings too amiable and patriotic, not to follow this useful occupation.

On what does all this uniformity of proceeding in intelligent and prosperous Nations, depend; but on the great principles and great interests of human nature. It has been well observed, that agriculture is perhaps the only pursuit in which political men can find comfort, after they have resigned their power; and this is not less true, where they have sense, virtue, or domestic qualities. Agriculture is an occupation which by its infinite variety, its constant exercise of the intellect, the beautiful objects connected with it, and the degree in which it flatters self love when its works become perfect, joined to the sense of the utility attached to it; it is an occupation, we say, which is capable of filling a large void in the human mind; and, even of affording something like consolation for disappointments.—In our days, in particular, *additional pleasures* are to be obtained from this occupation. Besides the new objects and operations which have arisen among ourselves, or have been derived from foreign countries; men of science have laid open to the intelligent Agriculturist, so many recently discovered processes occurring in vegetation, that he seems as it were not only to be *taken into partnership* with the great provider of all good, but he is even allowed to direct many of the efforts of nature, and as it were to change her very constitution and habits. ***** If there be any truth then in the observation, that those are among the happiest of men who have laboring hands, a thinking head, and a feeling heart; and if the farmer joins to this the reflection of the participation which is thus allowed to him in the works of Providence, and the avowed utility of his profession; he will possess a conscious dignity and satisfaction; and may safely say, without being held profane, or fearing to be contradicted

FARMER, REVERENCE THYSELF.

Agricultural Society of Maine.

The second Cattle Show of the Agricultural Society of Maine, was held on Wednesday, the 31st of October, on the Plains between the villages of Hallowell and Augusta. As the period appointed was late in the season, and the object was of some novelty in our part of the country, as well as of some importance to the whole state, it was looked to with a mixture of curiosity and anxiety. Happily the day was bright and without wind, and the temperature of the weather such, as left no one room to complain either of heat or of cold. The day being thus favourable, the Show and every thing else corresponded with it.

The collection, both of heifers and of young bulls, was very fine, and matter of great promise for future years; the working cattle were numerous, and answered every expectation, both in their appearance and performance; the stud horses were eleven in number, including Financier, who for want of sufficient length of residence, could only be exhibited; the lots of sheep were somewhat less numerous, but displayed different shades of the merino breed, besides some which were professedly mixed; the swine were good, but on account of the trouble of transportation, were, in general, very young; lastly, the cows also were good, but the largest, (belonging to Mr. Little, of —) though far excelling every other in size, was not proved to excel them in milk, the principal quality looked for in this part of the Show. The butter and cheese appeared in considerable quantities, gave satisfaction to the inspectors, and met, in gen-

eral, with a ready sale, at high prices; and the whole would have been sold still more readily, had not the day following the Cattle Show, when these articles were exhibited proved rainy and stormy. A handsome piece of Carpeting was exhibited by Mr. Elias Bond of Hallowell, with a Leghorn hat by some other person, and several threshing machines. Two crops of Swedish Turnips were brought forward for premium, both exceeding 560 bushels per acre. There was a good crop of potatoes announced; with a large and heavy crop of wheat, besides one of corn, of 102 bushels to the acre, but of less weight by the bushel than one which fell short of the number of bushels required (which was 70.) Among the vegetable productions were several large pumpkins.

Of the company there was much to boast. Our late Governor (Gov. KING) was present, as a new mark of his constant zeal for the interests of the Society; as also General Wingate, one of the candidates to supply his place, and a gentleman likewise who has generally attended the public meetings of the Society. Judge Paris, the Governor, would have been present had he not been on public duty. Three out of the nine Vice Presidents of the Society were present; a proportion (too small however) of the Trustees; one Senator and three Representatives to Congress, several gentlemen who had heretofore served in Congress; a judge of the Supreme Court of the state; several other judges; and an assortment of company drawn from eight counties out of the nine into which our state is divided. The spectators on the ground were fluctuating, but on the whole perhaps amounted to 4000; all, with very few exceptions, very decently clad; and all behaving, in general, with propriety, and without any oaths or improper language, and with scarcely a single instance of intoxication.

Of the events of the day, the most animated part was the drawing of a loaded drag and a loaded broad wheeled cart by cattle; which was very memorable for its results. This part of the Show was prolonged to the next day.

The procession of the members of the Society to hear the address, headed by General Robinson, the Sheriff of Kennebec County, moved about a quarter before one, and arrived at the Rev. Mr. Gillet's Meeting House, about one. The Rev. Mr. Gillet gave a short, but very appropriate prayer, previous to the reading of the Address; an office performed by John Davis, Esq. of Augusta, who acquitted himself very happily in his task, except that from not being accustomed to speak to so large an assembly as was there present, he pitched his voice unfortunately too low to be generally heard. The address will speak for itself, as it forms part of the columns of our paper this day. The dinner was given in the Hall of the Hallowell and Augusta Bank, by Mr. Smith of the Washington Hotel; and passed off very harmoniously, and as if the occasion had made the whole company brothers. The Marshalls of the day were J. M. Ingraham and S. K. Gilman, Esq's. under whose auspices every thing assumed an air of order and ease; except at the drawing of the working cattle; when the crowd partook too much of what was passing, not to press in upon the cattle nearer than was wished.

In short, considering the day of the Cattle Show, as still a day of experiment with us, and knowing that the whole committee of arrangements did not meet together till Tuesday noon, and that the trustees who were to appoint the committees for adjudicating the premiums, in truth had no regular meeting at all, and that the very limited funds of the Society prevented part of the wished for expenditures; the day must be considered as having passed very happily.—The Committee of Arrangements for next year, when the Cattle Show will again be held at Hallowell, are Gen. Chandler, Col's. Ladd and William O. Vaughan, B. Brown, Esq. of Vassalborough, and R. C. Vose, Esq. of Augusta. From the energy and knowledge of tactics possessed by this Committee, the expected increase of funds in the Society, and the means of profiting by what has passed on our Show Ground and elsewhere; there is a well founded hope, barring those accidents to which all that is human is liable, that next year will leave little improvement to be

desired, particularly as the feelings of our farmers and of the public in these parts, seem to be at a high pitch of excitement.

The day for the next Cattle Show of our Society, will be on the second Wednesday of October, (instead of the last Wednesday,) which gives an additional chance for having the next Cattle Show celebrated under an improvement of its circumstances.

N. B. The official account of the Cattle is expected soon to make its appearance.

FOR THE AMERICAN FARMER.

On Indian Corn.

10TH JANUARY, 1822.

Sir,

I am to prove to you that I have two stalks to the hill throughout my corn field—

Although liberal in dropping the seed corn, we do not think it necessary to commence thinning, as early as is common, but wait until the appearance of this beautiful plant, gives some indication of the quality of the ground in which it grows. At our first thinning, three plants are left to every hill except where the ground shows evidence of great inferiority, in such places only two plants are left, and in this state it remains until there is appearance of shooting to joints, by which time the quality of your ground is fully developed. Intelligent hands, with long, strong, and sharp knives are now set to work. Where the plants have a strong and healthy appearance, three are suffered to remain, where they have but a common appearance, two only are left, but where they look stunted, yellow, or upon *known poor ground*, only one is left.

I was led to adopt this method of thinning, in consequence of an experiment made upon a bet that I lost, which of three persons would grow most corn to the acre. I planted in rows six feet apart, every ten rows alternate were planted, one stalk one foot apart, two stalks two feet apart, and three stalks three feet apart. The bet, and the corn in a situation and of a growth which drew constant observation, made it interesting, and the general opinion decided in favor of the three stalks as best, and against the one stalk as worst.—The corn should be cut as low as possible, and always from the remaining stalks, and wherever a dwindling stalk appears among those of a superior growth, pull up or cut off the inferior.

I have not noticed the various modes of, or materials for manuring, as it is my intention to state my success in a future paper, and because your useful and wide circulating journal, has already communicated a great many valuable hints upon this subject, yet I must acknowledge the important observations made by G. W. in your No. 38, v. 3d. His experiment is not only within the reach of every farmer, but when we consider the cheapness of the materials, and the great saving of labor, I hope the experiment will have a full, fair, and comparative trial with other manures. Let the experiments be like those of Mr. Quincy of Boston, who putting a fair value upon every kind of labour, rent, and materials, always draws a convincing result.

I will try the plan of G. W., for I have so often to contend with the tremendous labour of manuring my corn with farm yard manure, that I gladly catch at any rational plan which will enable me to perform this necessary work in better time, and at less expense.—Nor can I pass by the admirable essay by Mr. Ruffin, in your No. 40, v. 3d, which should be read by every practical farmer, and I earnestly recommend experiments with lime, to ascertain its power to eradicate sorrel, a vile plant which is overspreading every part of our country, more especially where the clover husbandry has prevailed. Mr. Ruffin says—"An acid soil made artificially calcareous by lime or shell marl, is thereby rendered incapable of producing sorrel or broom grass." What say the marl farmers of Talbot county?

I now sir proceed to touch upon a part of corn husbandry, which has of late years become very fash-

ionable, and the value of which, I confess myself incapable of comprehending. From my earliest remembrance, I have been accustomed to see corn with the tops, blades and stalks, taken at one operation from the ground, but the motive was then generally understood—It was to better improve a piece of grass land, or a lawn, and was of course upon a small scale. But for the enterprising and extensive farmer, and who is perhaps in want of labourers, what is gained by removing in this form corn from the ground which is to be immediately sown in wheat? Certainly by this process the ground cannot be fertilized or rendered more productive—admit that every acre so managed gives you an extra bushel of produce, are you certain that this one, has not cost you two bushels?

Mr. Madison's admirable address, published I think in your first volume, has said all which can be said in favor of corn, as a source of manure, and most frequently my enquiries have been answered by saying, that this method increases the manure heap—This is possible, nay probable, (for in general, the fodder is only fit for the manure heap.) I can only discover that the manure heap is increased by the loss of much fodder, some corn, and much labour badly applied.

I have this fall been desirous to seek conviction, and more than usually attentive, I have examined the stacks or shocks in more than twenty fields, and can with great truth say, that not one of them showed good fodder.

How should it be otherwise? If the maturity of the grain is consulted, we know that the blade is too old, if the perfection of the blade is a consideration, your corn is not perfectly ripe, and although it will be safely dried, yet it will be loose upon the cob, and weigh light.

You undertake this operation at a season when there is an uncommon press of work when you should be taking out manure upon your fallows, or upon poor spots of your cornfield, from which indeed you may remove your stalks, because such spots are first ripe, corn light, your manuring is a primary consideration and the corn only a back load. By removing the corn and fodder of a large field, you may seed your wheat with fewer, neater furrows, (the only gain I can imagine) and place your land in better form for the scythe but are these your objects?

Manuring a field under this new management is out of the question; for by the time you have cleared all off, you are quite as late, and rather later than you wish for seeding.

Although I am yet to learn what we gain by this new plan, it is evident what we lose. In either of the two cases first mentioned, you have bad fodder or shrivelled corn—2dly, you break down your teams, prevent manuring, and procrastinate your seeding—3rdly, you increase the labour of husking, and expose yourself to great loss of corn by negligence and inattention—4thly, you increase your labour by frequent handling and securing your fodder, and last, but not least, you absolutely impoverish your land, by exposing the stump and roots of your corn, instead of suffering them to remain and rot in the ground.

Perhaps we have been led into this new and laborious management by seeing it so uniformly performed to the North—There indeed their climate, course of crops, and small fields will bear them out—always and justly apprehensive of an early frost, they cut up their corn before perfectly dry, and of course their fodder is not yet dried up, and with them, relying principally upon hay for winter provender, the grain, and not the fodder is the object—and as they rarely seed winter grain upon corn ground, it proves that removing their corn and stalks, it is not to improve the mode of seeding wheat.

Hitherto I have steadily adhered to the old custom of first blading then topping, and at my convenience in suitable weather after seeding, gather all my stalks. But the gale of last September which prostrated and tangled a fine field of corn, reminded me that I had often suffered in the same way, and reflecting that my Tobacco is improved by topping, that by early topping storms would have less power over my corn, that by blading in the first instance, the tops became dry and tasteless, and the blades thereon often whipped

to rags; I have determined to make the most of Eastman's improved cutting machine, by taking off the tops as soon as the tassel is dry, and farina exhausted—If after this I can save my blades I will do so, but as I make much upland hay, my blades shall be so far a secondary object, that more important work shall not be sacrificed on their account, nor shall the health of my people be staked for their safety.

I have paid much attention to select my seed corn from such stalks as produced two or more good ears, and always endeavor to provide twice as much as may be necessary for planting, that I may select the best ears for length of cob, depth of grain, number of rows, and weight of grain, and believe that by this method my crops are improved, but I never did measure the grain of two moderate sized ears, against the grain of one large ear.

I conclude by informing you, that between Christmas and the 8th inst. twenty-seven blacks from the circle of twelve miles, have made an excursion to the slave concealing states, and are no doubt hospitably received and humbly entertained. I find the law is now established in Pennsylvania five years confinement for the murder of a white man, and nine months for a rape committed on a white woman.

Y^r. Ob't Serv't.

F.

To the Editor of the American Farmer.

MR. SKINNER,—In consequence of my wish to examine all the authorities within my reach, on Earths and Soils, the inclosed translation from Rozier's "Complete Course of Agriculture," was made by a very young lady, for my use. The difficulty of translating from that work is very great, owing to the numerous technical and provincial terms, and the difficulty, of course, is much greater to one totally unacquainted with agriculture. On this account, the author's words are rendered as literally as the difference between the French and English idiom would allow. As I know of no English translation of this (or indeed of any other modern agricultural) work, you may attach some value to the piece.

The application of sand to clay soils, and clay to sands, recommended by Rozier for improving the texture of both, though certainly advantageous, yet seems too costly to be practised on our cheap lands. But in certain situations it might be highly profitable, could we previously ascertain the probable benefit. I am compelled (with a view to other purposes,) to dig great quantities of stiff clay, and would gladly use it for improving my poor light land, could I be informed by you or any of your correspondents, what benefit might be expected. Every one can calculate for himself, the cost of the application: but to form a correct judgment of its advantages, we must know the quantity of clay laid on, its degree of purity (or the proportion of sand with which it is mixed,) as well as the increase of value to the soil, and its produce. I think you stated in one of your former numbers, that this mode of improvement had been practised near Baltimore.

R.

ON EARTHS AND SOILS.

Translated from the French of the Abbe Rozier.

Ancient authors have not thrown any kind of light on the knowledge of Earths, and modern ones for want of method, have a great deal to wish for on this important part of Agriculture. All Geonomical works treat of earths by characters from which it would be difficult to draw inferences on the properties of the soils, which these earths compose. They are so many accidental qualities. The coloured earths are distinguished into black, white and yellow. The different species are distinguished by the appellations of soils, dry or humid, compact or friable, light or heavy, poor or rich: all unmeaning characters, because all of these different qualities offer good and bad soils. But what adds still more to this want of sig-

nification, is that this nomenclature varies from one province to another, and often from canton to canton; so that it is difficult to speak in a more intelligible language. Under these circumstances, how are these treatises to be understood? By exploring the country, and examining its productions; then say the writers on soils, if you meet with *Piable*, that will indicate land suitable for wheat—Fern, land for rye, &c. These are conclusions, it is true; but let us substitute a much surer method, and reduce to principles the knowledge of earths.

Of the Nomenclature of Arable Earths. I reduce them into four kinds. Siliceous or sandy earth—Aluminous, or clayey earth—Calcareous, or chalky earth—Humus, or vegetable earth.

These are the only four earths for agriculture. Every arable soil is composed of their mixture, and the different proportions of these four earths are what make the variety of soils, and which constitute their goodness, or their mediocrity. Let us in the first place, consider each of them in its state of purity.

Siliceous or sandy earth is barren: the solidity of its particles, and their want of coherence, prevents them from being penetrated by water, which passes through the sand as through a sieve. This same solidity causes the sand to heat quickly, and retain the caloric, and much more strongly, when it is coloured. The action of the atmosphere, the first of improvements, is nothing on sand. Vegetables cannot germinate and grow unless they are kept constantly wet. Pure siliceous, or sandy earth is then unfertile.

Aluminous or clayey earth, in its state of purity, is white; it cleaves to the tongue, is of an extreme tenacity, easily absorbs water, with which it forms a paste, soft to the touch, and susceptible of taking any form: Thus it serves equally, the statuary and the potter. Fire gives it the solidity of stone. Seeds commonly find in clayey earth, enough humidity for the development of their germs; but the fibres of the roots cannot extend into an earth so compact. Is clayey earth subjected to dryness?—its moisture exhales, the clay shrinks up, cracks and splits into large rents then the tender fibres of the young roots are torn—the base of the stem is compressed in every direction by the contraction of the earth, in the same manner that the roots are upon their side; the plant languishes, and in the end perishes. Should there be rains, it is only while they continue that the clay will embe them; for although this earth strongly retains humidity, yet when once dry, it is slow to retake it, above all when it is in a mass; thus the rain water filters through the cracks, to be directly absorbed by the dried up roots, which instead of reviving, are touched with mould, and perish. What action can the atmosphere possibly exercise on an earth either hard or dry, or softened in this manner by water?—its compactness is such, that it cannot open its bosom to the benign influence of the atmosphere; altho' when finely divided, it unites itself to all the gasses. Aluminous, or pure clayey earth is then also barren.

Calcareous or chalky earth, (carbonate of lime) is that which by calcination becomes quick lime: it constitutes chalk, marble, and all calcareous stones. Shells, and those immense banks formed of their remains, such as the *Faluns*, are nothing but calcareous matter, for it is the animal kingdom which produces and accumulates on the globe, this kind of earth. Water wets it in the same manner as sand; it only passes through it. Moisture renders it heavy. Its whiteness repulses the rays of the sun, and will not allow it to absorb the caloric; so that the temperature of this earth, inferior to that of all others, constitutes necessarily a cold soil. Calcareous earth, the most barren in its state of purity, (and it is in that state that we consider each separately,) notwithstanding, carries fertility with it into the soils with which they associate it in suitable proportions. It is thus that marl fertilizes more or less according to the quantity of calcareous matter which enters into its mixture, and that it becomes a valuable amendment for worn out soils. The chalky plains of Champagne attest the poverty of this earth: it is only after a repose of several years, that a scanty crop of spring

grain can be obtained. Thus, calcareous or pure chalky earth is likewise barren.

Humus, vegetable earth, or mould, is the remains of vegetables which have undergone putrefaction. Vegetable earth is combined with salts, and only substances, and has gasses which add to fertility. This earth and these substances are all disposed to enter into vegetable organizations, and this makes *Humus* the first of manures. In this earth, seeds germinate easily, and plants grow rapidly; but the too luxuriant vegetation has not time to complete its round—if the plant blossoms, it is only to perish before it comes to maturity. The other earths are rendered unproductive by their want of fertility—*Humus*, or vegetable earth by its excess.

All arable soils are composed of these four earths which have been described. Chemistry admits of others; but they exist in quantities so small, as to have no effect on vegetation, while our four earths, the remains of mountains, cover the surface of the globe, on which they have been deposited by the waters with which the two hemispheres have been deluged. These earths are deposited either singly or mixed.

Of the diversity of soils. It is the respective proportions of these four earths which constitute good, bad, or indifferent soils; for, we repeat, that each of the three first in its state of purity is barren, and it is only from their mixture that fertility is produced—above all, when *humus* becomes a part. The mixture produced by nature, varies infinitely. The alluvions which have successively covered the globe, have deposited, one after the other, siliceous, aluminous and calcareous earths. It is these alternate deposits which have formed the strata that are met with, particularly in valleys; which when they have but little thickness mix easily, and constitute excellent soils: for often these deposits are homogenous—here the siliceous, there the aluminous, and still deeper, the calcareous. Happy the proprietor of land composed of our three earths, the mixture of which constitutes a rich soil, one of those soils for wheat which returns from 20 to 30 for one. These mixtures, for which we are indebted to chance, may be easily made; in this consists the art of improvement. But to be able to imitate these rich soils, one must know them, and must also know the proportions of the four earths, which constitute so happy a mixture. Now nothing is more simple than this kind of analysis, which serves to separate the four earths composing the soil you wish to know. It is only to weigh a pound of earth, dilute it with water, and stir the mixture; the siliceous being the heaviest will fall first to the bottom, separate it, [by pouring off the fluid] and weigh it. The aluminous, and finely divided calcareous each will be mixed up in the deposit which floated over the siliceous: then throw in any kind of acid; it dissolves the calcareous, and leaves the aluminous, which is also weighed, and that which is wanting in the weight will be calcareous earth, which the acid dissolved. This analysis made on a soil of the first quality, as a wheat soil—made in the same manner on a eye soil, and then on an indifferent soil and the different results known, every proprietor will know exactly to what point his soil approaches, or how far it differs from those soils, which are his objects of comparison. This knowledge, in the actual state of things, no proprietor possesses; so that he who has cultivated the same field for upwards of fifty years, is still ignorant of what would be so easy for him to learn, by the aid of our analysis.

We shall enlarge but little on the happy application of this knowledge, when once acquired. It may be supposed how easy it then becomes for every proprietor to rectify the mixtures of earths made by chance in his kitchen garden, his orchard, and even in his agricultural works altogether; which takes place when he marls his fields. The art of improvement is only this: it consists in correcting one earth by the addition of another; to which let us add, that without this first knowledge of the composition of a soil, we are only groping in the dark, with respect to its improvement. Each contents himself with imitating his neighbour; but that which would be proper

for one field, would (frequently) be improper for the one contiguous.

Composition of Soils. Examples of the composition of soils: a rich soil—Siliceous 2 parts, Aluminous 6, Calcareous 1, Humus 1; in all 10 parts. A good soil—Siliceous 3 parts, Aluminous 4, Calcareous 2½, Humus ½; in all 10 parts. A middling soil—Siliceous 4 parts, Aluminous 1, Calcareous 5, less by a few atoms of Humus, in all 10 parts. This shews that the greatest proportion of aluminous earth constitutes the greatest goodness of soils; and independently of their harmony of composition, they require a tolerable depth.

Having assigned to each of our earths the properties which characterize them separately, one may easily judge from thence of the parts which they respectively sustain in the composition of soils. Thus the siliceous, a collection of incoherent particles, separates the too coherent parts of the aluminous earth; a mechanical effect, which opens the bosom of this last, to all the influence of the atmosphere. In this association, the siliceous earth, incapable of retaining water, shares the humidity of the aluminous, and absorbs enough caloric, by which the aluminous is with difficulty penetrated. The siliceous counterbalances the cold quality of the aluminous, and so on with the calcareous, the humus, &c. Many thousand kitchen gardens offer us an application of these principles for the melioration of their soils. A proprietor carries me into his grounds: we arrive at his kitchen garden; I question him on the qualities of the soil—here is his answer. "The soil is excellent; you see how the cabbages, the artichokes and the thistles flourish; but I cannot raise carrots, parsnips, nor beets. Every tap root becomes twisted—the earth is difficult to work, is always infested with weeds, and is generally cold." "Nothing is more easy," I reply, "than for you to procure the different soils, requisite for the different kind of pot-herbs. Your soil contains too much of the aluminous earth. Leave a part of it in its natural state, which will serve for the more vigorous plants; improve another part with siliceous, another with a mixture of siliceous and calcareous earth;—vary the proportions, and you will have every soil, and all their productions. Trees and agreeable plants will grow in every place, because you have made soils proper for them." Treat in the same manner your kitchen garden.

The species of soils. The earths, the mixtures of which form arable soils, being of four different natures, siliceous, Aluminous, Calcareous, and Humus, I establish four species of soils, which shall take their names from whichever of the four earths may predominate in their mixtures. They are, Siliceous soil, Aluminous soil, Calcareous soil, and Humus soil. There is not a single soil in which one of these four earths does not predominate, and which, therefore, may not enter into one of these four species. But how indicate the proportions of these same earths in each particular soil? Nothing is more simple. It is only by shewing them under a complex name, composed of two or three words indicative of their species, [and the largeness of the several proportions of each earth composing a soil, expressed by the order in which those words are placed.] The following table will render this definition easily understood.

GEONOMICAL TABLE.

<i>The nature of Earths.</i>	<i>The species of Soils.</i>
Siliceous earth [predominates in]	Siliceous Soil
Aluminous —	Aluminous —
Calcareous —	Calcareous —
Humus —	Humus —

SUBDIVISION OF SOILS.

1.— <i>Siliceous Soil.</i>	3.— <i>Calcareous Soil</i>
Siliceous Aluminous.	Calcareous Siliceous
Siliceous Calcareous	Calcareous Aluminous.
Siliceous Aluminous Calcareous.	Calcareous Siliceous Aluminous
Siliceous Calcareous Aluminous.	Calcareous Aluminous Siliceous.

2.—*Aluminous Soil*
Aluminous Siliceous.
Aluminous Calcareous.
Aluminous Siliceous Calcareous.
Aluminous Calcareous Siliceous.

4.—*Humus Soil.*
Humus Siliceous.
Humus Aluminous.
Humus Siliceous Aluminous.
Humus Aluminous Siliceous.

FOR THE AMERICAN FARMER.

INDIGO.

Philadelphia, December 21, 1821.

Dear Sir,—I have the pleasure to send you a letter from an esteemed correspondent in Calcutta, and also the paper on the preparation of indigo, to which he refers.—It may possibly prove useful at present, or hereafter, to some of our Southern fellow citizens, notwithstanding the cultivation of the Indigo plant has been almost entirely laid aside for the more healthy and profitable cotton shrub. But the price of cotton may continue to fall in Europe, and the demand for Indigo cannot fail to be steady in the United States, for our manufactures are daily extending, in spite of all opposition, or indifference. Indigo may therefore once more be worthy the attention of the Southern planters. The quality of the article made by them, never stood high, owing no doubt to want of knowledge, or care in the preparation of it.—Whether the particular species they cultivated, is the same as those in Bengal and South America, I do not know, but I shall inquire into the fact. The genus is extensive. I shall be happy in hearing, that the information I have been the means of diffusing on this subject has contributed to the improvement of an article so essential to the true independence of our country.

My best wishes are offered for the success of your excellent Journal.

JAMES MEASE.

J. S. SKINNER, Esq.

I have been favoured with the annexed statement of the wholesale prices of Bengal and Spanish Indigo, for several years past, by the most extensive dealer in that article, in Philadelphia.

<i>Spanish.</i>	<i>Bengal.</i>
1811, June, \$2.10—2.12.—Oct.	\$1.80
—, Aug. 2.00	
1812, March, 1.95	Feb. 1.87
—, Sept. 2.05	March, 1.90
1813, Feb. 2.00	Feb. 2.25
—, March, 2.30	
1816, May, 2.45	
1815, June, 1.80	
1816, May, 2.25	March. 2.37
1817, Feb. 2.10	
—, Aug. 1.85	

Since 1817, it has raised from the price last quoted, to \$2.25, at which it now stands. From the daily increasing demand, there is no prospect of its being lower.

For an excellent paper on the use of indigo in dying, and on the different qualities of the

article, see *Archives of useful knowledge*, vol. 1, page 305.

Calcutta, 22d July, 1816.

DEAR SIR,

On the coast of Coromandel they have been in the habit of making Indigo, by what is there called the Dutch method, having borrowed it from Java, that is from the leaf only, pulled from the plant and dried. One of my correspondents having just established a factory, wished to try the Bengal method, as he termed it, from the plant cut green, and requested me to endeavour to procure for him the most approved process used in this settlement. Fortunately, (for it is quite out of my line) I knew a young man whose good qualities and general abilities had induced an eminent planter and manufacturer to tempt him from a Commercial House, in which he had been placed—he had been long enough in the Indigo business to have seen the whole operation, and not long enough to have forgotten the circumstances that first struck him, or to effect that mysterious reserve, with which my enquiries might have been met by an older practitioner. His answer is clearly expressed, and I have every reason to believe that it is a faithful and fair detail of the method pursued by those who have long and successfully carried on the works, to the superintendence of which he had been called. His letter gave great satisfaction to the gentleman for whom I had made the enquiry.

I recollect to have heard from two or three Indigo Manufacturers, that the inferiority of our Carolina Indigo, was more to be attributed to the process in making, than the soil and culture; the great improvement in quality of the Bengal Indigo, since it was first undertaken by Europeans, and the superiority that some makers maintain here over others, seem to countenance this opinion. While considering what I had to offer, it occurred to me that this paper would be acceptable to you, and as I see by the Price Currents that the cultivation is still continued in Carolina and Louisiana, it may possibly afford some useful hints to those engaged in it.

I remain, Dear Sir, very respectfully,

Your most obedient servant,

D. INGRAHAM.

Dr. James Mease, Philad.

Extract of a letter written in October, 1814, from a gentleman in the superintendence of some extensive Indigo Factories, on the Gan- ges, near Boglipore, giving a concise account of the process of Manufacture, &c.

"In the cultivation and manufacture of Indigo, much depends upon the soil, much upon the weather, and there are certain points which the manufacturer cannot learn by any description; he must acquire them by observation and experience.

In this part of the country, we sow at three different times of the year, viz: in October, in February and in June; though our chief dependence is in October sowings.—We think that the land which is most suitable for corn and mustard is the same for indigo. If we happen to have showers of rain in March and April, and if the regular rains set in by the

middle or latter end of June, our produce is then the greatest, and we are enabled to commence manufacturing about the 20th or 25th of June. The plant we consider as fit for cutting when it begins to flower, and a very good sign of its ripeness is the brittleness of the leaf: when young it will bend double without breaking, but when arrived at maturity will immediately snap on being bent;—and if you take a handful of ripe leaves, and put them to your ear and squeeze them, you will hear them crackle.—The fresher the plant is brought to the vats the better, and for this purpose we generally endeavour to have it cut very early in the morning, and brought in before the meridian heat of the day. I do not approve of its being cut over night for the next day's loading: as, though it may not be heated, I think the plant becomes flaccid and unwilling to part with the colouring matter. Should the plant, on its way to the factory, have become heated, it turns quite black—and we are particular in such cases, in separating and throwing it away, as we consider that when in that state it produces not a particle of colouring matter, but materially tends to spoil the rest of the plant, to impede the process of the manufacture, and render black and brittle the whole produce of the vat into which it may have been thrown. When the plant arrives at the vat, we untie the bundles and place them therein, not quite upright, but rather in an inclined position, with the stalks resting on the bottom of the vat. This inclined posture we think gives the water a more free access to the leaves. Over the first layer we place another in a posture rather more inclined, with the stalks uppermost, or perhaps I shall explain it better by saying as you would lay the grass on the thatch of a house. This done, the height of the plant in the vat will be about three feet. Over the plant we lay gratings made of split bamboos, (we do not use mats) and these are fixed down by means of large beams attached to the vats, at intervals of three or four feet, to resist the expansion caused in the plant by the fermentation. When the vats are loaded and ready, we let in the water, and the speedier the vat is filled the better, as otherwise the plant is apt to heat by compression in the vat, and consequently to spoil. We here fill a vat of 40 feet long, 18 broad, and 3 deep in 20 minutes by means of a reservoir. We always cover the plant completely with water:—this done, we leave the vat to ferment, a process which is generally completed in the space of from ten to twelve hours, at least so I have found it during my short experience. The fermentation is more or less according to the coolness or heat of the weather. The signs by which we judge that the fermentation is completed are, that the bubbles which are thrown up to the surface during its progress turn to a fine, light froth, spread over the surface in little tufts, the intervals between which are partially covered with a thin violet coloured scum.—The liquor will also feel slimy to the touch.—This we consider the proper time for letting it off.—Should the fermentation be allowed to go on, the froth acquires a darker and somewhat dirty hue, and the scum on the intervals turns to a strong copperish colour, and we consider

the vat to be too much steeped; not that it is spoiled, as some even carry on the fermentation, as long as sixteen hours, and say that the produce is increased; of the increase in produce, however, by this mode of treatment, I am not quite certain, but that the quality is materially injured by it, I believe there is little doubt. When ready we let off the liquor into the beating vat, and when all is drained off, the plugs of communication between the beating and steeping vats are shut, and we throw away the weed that remains in the steeper. We then turn in the people to beat the liquor which has been let off. This operation generally takes from two and a half to three hours, but I have beat as long as four or five hours, and in my opinion this is the part of the process which requires the nicest attention. With us the men stand in the liquor, and agitate it with paddles something like those used in canoes. The froth at first rises rapidly to the height of a foot or a foot and a half, and appears white tipped with blue; it then, as the beating goes on, gradually subsides, and becomes blue; the beating is continued till all this blue colour in the froth disappears, and it becomes clean white or with something of a reddish tinge, and immediately on the beating being stopped, dies away and leaves the surface of the liquor clear. We generally, however, judge of the progress of the beating, by now and then taking a little of the liquor and putting it on a clean white queens-ware plate, held in the hand, in an inclined position—at first it appears quite green, but in the course of the operation, changes gradually to blue, and the colouring matter begins to granulate; when the colour is quite blue and the granulation completed, (which is visible to the eye, by holding the plate inclined for about a minute or less) the fecula is observed to subside and leave the water of a reddish or strong Madeira wine colour. By this and the froth being clear, the vat is ascertained to be sufficiently beaten. We do not use lime water to ascertain this point, because it will equally cause a granulation and precipitate the fecula when the vat is only half beaten, as when it is completely so, and is consequently apt to mislead. We, however, add a small quantity to the vat when the beating is finished, to assist in the precipitation of the fecula—though if the plant be ripe, I do not think even this necessary. If the operation of beating be continued beyond the state above mentioned, the fecula becomes black and the quality of the Indigo is of course, injured. After the beating is finished, we allow an hour for the fecula to subside, after which we draw off the supernatant liquor, which if of a strong Madeira wine colour is considered best. If green, or inclined to a dirty blackish hue, in the former case the vat has been generally too little beaten, but this is always preferable to the latter hue, which shews the vat has been generally too much beaten, and should be carefully avoided. When all the supernatant liquor has been drained off, the fecula is collected, strained twice, and put into the boilers, to which the fire is set, and kept under them for ten or twelve hours. It is then taken away, a chittack (two ounces) of alum pounded and dissolved in water, is

ded to each boiler, and the fecula allowed to stand for an hour previous to its being let off on the draining tables. The chittack of alum is added, being of use in precipitating extraneous matter, which might affect the cleanliness of the Indigo. The fecula is left to drain on the tables till it comes to the consistency of a strong jelly, it is then put into frames, pressed, and cut into cakes, which should be left to dry as gradually as possible, not suffering wind to blow upon them, which will subject them to crack. I have now, my dear sir, communicated all I know on the subject, and it will afford me pleasure if it proves in any degree useful," &c. &c.

An Investigation of some curious facts in Natural History.

FOR THE AMERICAN FARMER.

Mr. Skinner,

As I am an old fashioned man, I could not but admire the simplicity of an article extracted from the "London Farmer's Journal," in the 39th number of your valuable paper. The agricultural community are there informed, that the properties of the male are transmitted, in breeding, not merely to the immediate offspring of the female, but to the remote progeny of subsequent conceptions, and by different sires! Consequently the breeder of Mules, for example, need only obtain one foal, from the Cross of the Ass with the Mare, and the Mare is then prepared to breed Mules from the Stallion Horse! Admirable indeed! How readily do the laws of nature accommodate themselves to the ill-digested theories of visionary men?—The votaries of Natural History may soon prepare themselves, for equivocal generation itself—not only among brute animals, but our own species! and soon may we expect to realize the vision of the Poet;—

"Men prove with child as powerful fancy works,
And maid's turned bottles, call aloud for corks!"

But to be serious, Mr. Editor, permit me to enquire of your practical readers, whether (admitting the supposition of the "London Farmer's" correspondent to be correct) the after offspring have been known to produce their kind, or, in other words, to breed?—Now, I hold it to be a fact past contradiction, that although a mixed offspring may be obtained, from the crossing of animals of different species, but of the same genus, yet no instance can be authenticated, where said offspring have been known to breed. And this agrees with what is remarked, concerning the animal produced from the Quagga and the Mare, in the article alluded to:—for that, we are told, "proved hybrid, or incapable of breeding." So Mules may be obtained from crossing the Ass with the Mare; but no one ever knew Mules to produce their kind. Mongrels may be obtained from crossing the Canada and the common Geese; but no one ever knew such mongrels to breed! It is a law of nature, that the different species of the animal creation shall not be commingled beyond the first degree. But according to the position assumed in the "London Farmer's Journal," the colts produced from an Arabian Horse out of a mare, that had previously bred a mongrel foal, possessed many of the characteristics of the Sire of this foal!—If so, then these colts must be mongrels! How shall we account for this? There can be but two suppositions, as I conceive, concerning it.

I. Either a portion of the seminal fluid remained "in utero" after the production of the mongrel foal, or

II. The characteristics of the Sire of said Mongrel become incorporated with the system of the Mare, at or after the first conception. As to the first supposition, if any portion of the seminal matter of the Sire of the Mongrel remained "in utero" after the pro-

duction of said Mongrel, and if said matter entered into the formation of the subsequent offspring, then this offspring must be of three parents, to wit: the Quagga, the Mare and the Arabian Horse! But this is impossible, for, in the first place, a mongrel, that is an animal of two species, cannot be formed otherwise than half and half—a greater or less portion of the blood of either parent than half cannot enter into the offspring. Nature, as I have said, has prohibited the commingling of the species, in any other portions, than half and half! otherwise we should see 1-4 and 1-8 blood mongrels, which is contrary to all experience.—In the second place, supposing the instance to relate to animals of the same species, I believe it will be contrary to experience and repugnant to common sense, to suppose an animal the offspring of three parents!

II. As to the second supposition, viz. that the properties of the Quagga become incorporated with the system of the mare, prior to her conceiving by the Arabian Horse—this is not only absurd but impossible. It is absurd, in as much as, if we admit it to be true, then a dray-mare, that has bred several colts from the Race Horse, may be supposed so transformed, as to breed race s even from a Flemish Stallion! It is impossible since every anatomist will agree with me, that the "foetus in utero" is a mere recipient, and can neither contribute to the nutriment nor the inherent qualities of the parent, any more, than wheat can add to the character of the soil it is sown in. Having thus seriously attempted a confutation of the doctrine of the "London Farmer's correspondent," it may be expected that I should say something by way of accounting for the phenomena, he has described—and first, of the Arabian Colts.

Both these animals, "we are told," "in their colour and in the hair of their manes, shewed a striking resemblance to the Quagga." Now, as to this animal, I have myself once had an opportunity of seeing one, in London (a male), and as to Arabian Horses, I have seen many, and of various casts and breeds. The Quagga has a light and thin mane and tail, his colour is of a light mouse grey ground; is marked with a dark coloured list, down the back and across the shoulders; his head, neck, fore arms and sides are striped similar to the Zebra, with dark coloured stripes upon the mouse coloured ground above named—his back and buttocks, with the exception of the list, are without stripes. His form is much like that of the small Ass of Barbary.

These characteristics, (in a certain degree) are also to be observed in the Arabian Horse, (with the exception of the stripes on the head and neck) and not unfrequently. I have myself witnessed several specimens, among the rest a number of half-blood Arabians of a light ash colour, listed across the shoulders and along the back, and having stripes around or crossing the fore arms, from Horses imported into New England from Tripoli, by the late Gen. Eaton. Two years since, there were four of these animals in the city of New York, driven in the carriage of a gentleman, of course—the position I take touching their colour is notorious.

As to the other instance, adduced concerning Swine, I am of opinion, that the colour of the Pigs described, might be easily accounted for, were the Pedigrees of the Boar and Sow, and also the peculiarities of colour among their ancestors presented to us, it being a known fact, that the characteristics of the ancestors will occasionally exhibit themselves even among the remote progeny. At any rate it is by no means surprising to notice, among animals of the same species, new varieties of form and colour, either from accident or otherwise.

Positive and dogmatical, as the preceding remarks may appear, my opinions are not grounded on a vain theory—I appeal to experience—"Thy Servant's" race hath been Cattle from his youth, even until now," and he doth not fear contradiction, but expects support from every sensible and practical agriculturist.

GEORGAS.

New York, January 2d, 1822.

Communicated for the American Farmer, by
G. W. JEFFREYS.

THE STERCORARY.

QUINCY, (Mass.) June 20, 1817.

Dear Sir.—I should have earlier acknowledged the letter you did me the honour to address to me in April last, but absence from home, and engagements prevented that attention to it, which it was entitled to receive. Your inquiries needed no apology. It gives me great pleasure to correspond with gentlemen interested in agricultural pursuits. These now occupy much of my thoughts, and success in them is deeply connected with the prosperity of our country.

In relation to the particular object of your letter, I do not know how I can better reply than by referring you to the first volume of the Memoirs of the Philadelphia Agricultural Society, page 282—which contains all the hints, I deem essential on the subject of a Stercorary. My letter to Judge Peters, to which you refer and which he published, was intended only to counteract the opinion, he expressed of the effects of a stercoreary under a barn. My experience had shown, that if sufficiently spacious and well ventilated, it had no injurious effects upon the health of the animals above, or upon the quality of the manure. I stated my experience, and to my surprise found myself in print. Every thing essential to be attended to in the construction of a stercoreary, is I think contained in those memoirs. To be covered—to be water-tight—to possess an easy mode of passing the draining over the heap—are the most material points of attention. The scale will depend upon the size of farm to be accommodated—or the state of capital employed.

With respect to your inquiries concerning the quantity of water to be applied, &c.—I know no rule on the subject, nor any do I believe exists, which common sense will not dictate—not to admit more than the water-tight receptacle would contain; that secured. I should let as much water enter as the surrounding buildings and declivities would throw in—unless indeed, the quantity was so great as to render working in the stercoreary inconvenient. As to the "time of irrigation," I have been wholly governed by convenience—On a rainy day—if my hands have nothing else to do, they irrigate my cellar—sometimes by the machine, I state in the letter to which you allude—at others by the aid merely of buckets. In doing this I have two objects, one is to produce fermentation, the other to enrich every part of the heap, by the particles contained in the drainage.

I have no experience of composts made on the scale and in the manner which you suggest. I use no straw as litter; my horses live upon this cut with oats, barley, or Indian meal. Sea-weed is my litter. "Weeds, leaves, earth," I think best treated in a rough way, and thus best composted. Let the yard be made of a size suited to your stock—cast in those substances occasionally, and yard your cattle upon them at night. By treading and manure, &c. they unite and amalgamate the mass. If you choose then

to cart it to your stercorary, there mix, irrigate and let these substances ferment, the better.

I have not these two years past "turned over" my manure in my stercorary, any more than is sufficient to make good storage of it. Nor do I believe any thing is gained by "keeping manure" after it is one year old. As to rough composts out of gross materials, much must depend upon the material, and the advantageous circumstances, in which the heap has been composted.

I consider water as the best medium for communicating the riches of the manure heap to the soil.

The best mode is to cart the drainage upon the land, and apply it to the grass or to the vegetable cultivated. If this be not convenient, then, I never allow a loaded cart of manure to start from my stercorary until it is saturated with the drainage by pumping this on the load.

I shall inclose to you by mail, the last number of our Massachusetts Agricultural Journal, and shall be gratified to hear that it reaches you in safety.

The state and scale of Agriculture is so different in North Carolina and Massachusetts, that I scarcely know whether any thing I have written can be serviceable.

You will receive it, however as the best information I have to give, in compliance with your request: and as an evidence of the respect with which

I am, your's, &c.

JOSIAH QUINCY.

Geo. W. Jeffreys, Esq.

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This is a point which has been the subject of more experiment than perhaps any other in which the United States are interested. The system of restriction on our part, is in that particular state, that we must necessarily go on with it, or reverse it, and that immediately.

It will need no very powerful arguments to shew that a modification of the latter plan is our best policy. The act of 1820 which prohibited the importation from the free ports of Bermuda, Halifax and St. John's, of any articles but those produced there, has had the direct contrary effect which was looked for—benefitting us, by extending our share of the carrying trade to the British colonies, inasmuch as the extensive supplies we sent, prior to the taking effect of that act, to Bermuda, at a freight at the rate, for instance, of 12 dollars per M. for staves, go now almost wholly to New Brunswick, at the rate of 5 dollars per M. for the same, with the like difference in other goods. In the mean while, the sugar, molasses, coffee, pimento, &c. which paid us so large a revenue, now go to the European markets—for it is a well known fact, that nothing can be sent hither from the British Islands, through those belonging to other powers, but rum; at the same time the facility of selling the cargoes we send to the free ports, by barter for the above articles, and which, if unrestricted here, would increase the vent and the profit at least two fold, is lost—to say nothing of the return freight to our vessels. So far

from relaxing in the navigation laws, the British government have lately opened the port of St. Andrew's, on our very border—while other sources of supply to their colonies are daily discovered: deals from the Baltic, and staves from Hamburgh, are seen shipping thither in large quantities, to say nothing of the resources in the Islands themselves; and the more impediments we place in the way of their dealing with us, the more they will look elsewhere for what they want. Does it not follow, that, in the end, we may teach them to do without us? It did appear three years ago, that the plan adopted on both sides, of dividing the carriage by the medium of free ports, was calculated to satisfy both parties, and so it certainly was, with regard to Bermuda. What crooked policy it was, therefore, to adopt a plan which lessened our share of that advantage! As matters now stand, let simply the prohibition upon imports from Bermuda be taken off, and it follows, to a moral certainty, that the great bulk of the exportations from this country to the British West Indies will go that way, instead of to the adjacent ports of New Brunswick, and at an advantage to our shipping interest, amounting to little less than the whole value of the object sought for, for it may very safely be asserted, that the trade with Bermuda is as great an advantage to us as that with Barbadoes. &c.

It is equally a voyage, and though somewhat less in duration, the rates of freight would be found nearly the same, and the difference of climate in which our seamen would be exposed is beyond comparison in favor of the former. The yielding by G. B. in aid of a direct and unincumbered trade can never be expected. It employs too many of her seamen, and too much of her floating capital, not to be an object of vital importance. Admitting that our supplies are indispensable, and that we derive the colonies of the obtaining of them out by direct importation in our own vessels, will it not be in their power when conceding this, so to burthen the traffic with taxes and tonnage duties as to make it ruinous to us; and, to prevent this, where are our restrictions to stop? A perfect reciprocity is evidently only to be obtained by the mode so natural of dividing the difference. And it is to be hoped, if this question is taken up in Congress this year, as has so often been the case, that it will be put at rest by the adoption of a plan similar to the one now pointed out. A.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 25, 1821.

THIRD EDITION OF THE AMERICAN FARMER.

It gives us great pleasure to announce that the Third Edition of the second volume of the American Farmer, has been reprinted, and is now in the Binders hands; to those who have ordered copies, they will soon be sent, and others who may wish to have them can now be supplied—Price 5 dollars bound.

This edition has been revised and corrected with very great care, and we persuade ourselves to believe that it is perfectly executed.

The third edition of the first volume will also be ready for delivery early in the month of March, and with it a very copious Index will be furnished. The Index appended to the former impressions of this volume, are not as full as we wish they had been made;

this defect will be remedied in the third edition, and shall not occur in any future volume of our work; nor should it in the case that we regret if our attention had been sooner called to the subject.

Our third volume draws towards a close, and as we have printed some surplus copies of it, persons who have not yet procured the work, will have it in their power by making an early application, to get the three volumes.

Our republication is an expensive undertaking, one that renders new subscribers at this time peculiarly desirable; and punctuality on the part of old ones absolutely necessary.

A Clerk and Messenger.

The Editor wishes to engage a Young Man of good education as a Clerk in the Office of the American Farmer; and a lad well acquainted with the city, to be employed as a Messenger. Satisfactory recommendations will be required.

Cabbage Seeds, Early Peas,

&c. &c.

JOSEPH P. CASEY, Seedsman, &c. has just received a fresh supply of

English Cabbage Seeds, &c.—viz.

Early Dwarf Cabbage	do	Large Amsterdam	do
Screw	do	Smyrna	do
Salisbury	do	Unique	do
York	do	Green Savoy	do
Sugar Loaf	do	Yellow	do
Penton	do	Cape Brocoli	do
Battersea	do	Purple	do
Late Battersea	do	White	do
Red Pickling	do	Green	do
Flat Dutch	do	Early Cauliflower	do
Drum Head	do	Late	do
Imperial	do	Dutch	do
1000 Headed	do	Smyrna	do
Turnip Rooted	do		

EARLY PEAS.

Six weeks Peas	do	Glory of America	do
Early Hotspur	do	Dwarf Marrowfat	do
Golden	do	Large Marrowfat	do
Prolific	do	Knights	do
Early Fame	do	Black-Eye Peas	do
Imperial	do	Field	do
Blue Prussian	do	Egg	do
Dwarf	do	Pearl	do

HOTBED SEEDS.

Egg Plant and Radish	do	Capsicums or Peppers	do
Seeds	do	Cucumber, of sorts.	do

With a variety of other Garden Seeds, Roots, Early Corn, of sorts, Bird Seeds, Tools, &c. Agricultural Almanacks for 1822.

CORN SHELLERS,

AT REDUCED PRICES.

The subscriber has just received from the manufactory a supply of those valuable machines at reduced prices, which enables him in future to sell them as follows: to wit—

Large size with the stool, at \$22	
Middle size	19
Small do.	16

For the information of those unacquainted with these machines, I will just say, that they have been often tried and will shell, with the aid of a man and boy, from 15 to 20 bushels in an hour; being mostly composed of iron they are not liable to get out of order—any person taking one and finding on trial, it does not perform according to their expectation, shall be at liberty to return it. It being small, the freight or carriage will be about the same as a barrel.

On hand a general assortment of PLOUGHS, Field and Garden Seeds, &c. &c.

ROBERT SINCLAIR,

Plough and Seed Store,

Ellicott street, Pratt street wharf, Baltimore.